

Why Build Green?

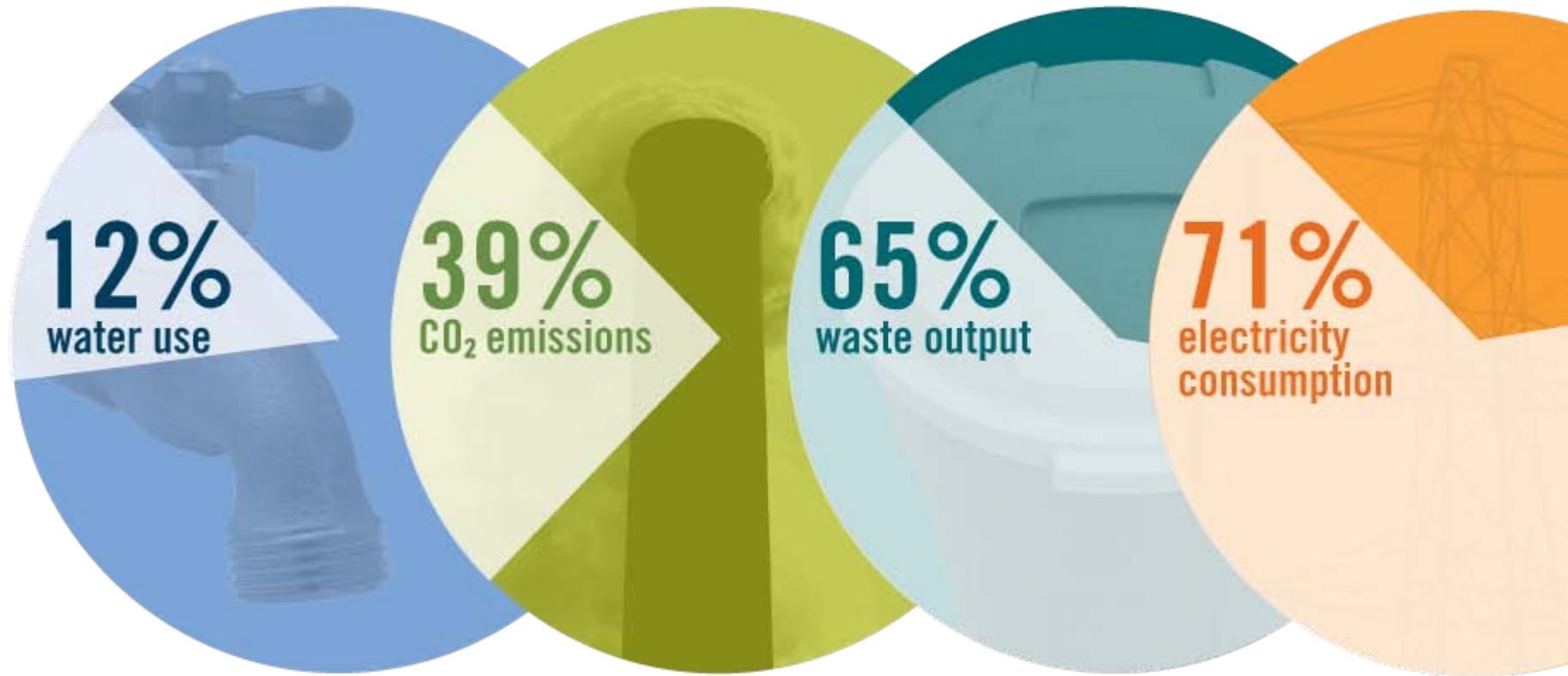
City Council Lunch
Springfield, Missouri
October 2, 2007



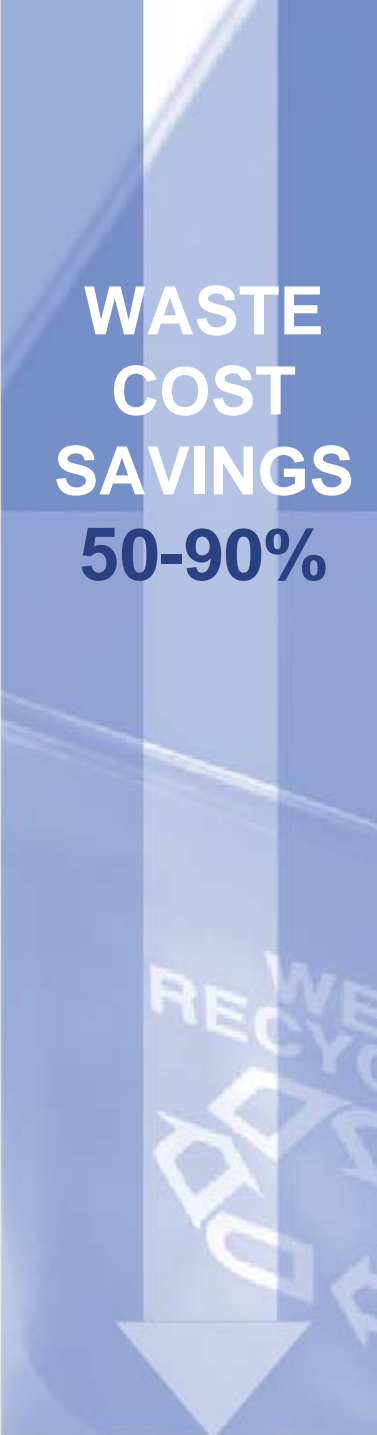
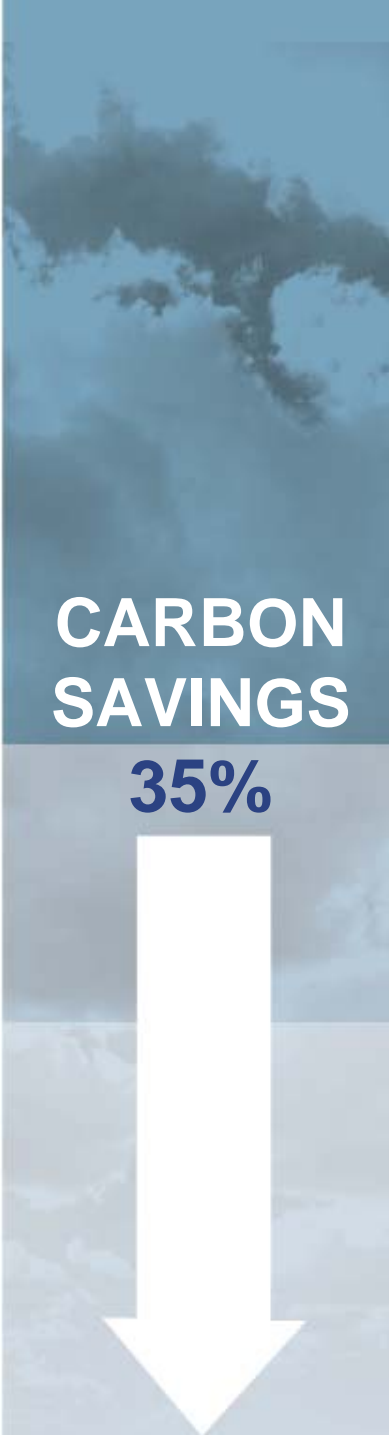
Jason Hartke

Manager, State and Local Advocacy
U.S. Green Building Council

U.S. Building Impacts:



**Average
Savings of
Green
Buildings**



Additional constructions costs for LEED-certified buildings

Average for offices and schools, based on 40 buildings

Conventional Building Cost (100%)

Additional Cost

PLATINUM
(2 buildings)

6.8%

GOLD
(9 buildings)

2.2%

SILVER
(21 buildings)

1.9%

CERTIFIED
(8 buildings)

1.66%

Incremental Cost Range

Typical Range of Incremental Percentage Capital Cost of Meeting LEED

- LEED Certified: **0 – 2.5%**
- LEED Silver: **0 – 3.3%**
- LEED Gold: **0.5 – 5%**
- LEED Platinum: **4 – 8.5%**

“The City of Seattle reports that the average incremental cost of meeting LEED Silver across all projects is 1.7%.”

Source: KEMA



12-24

10-20

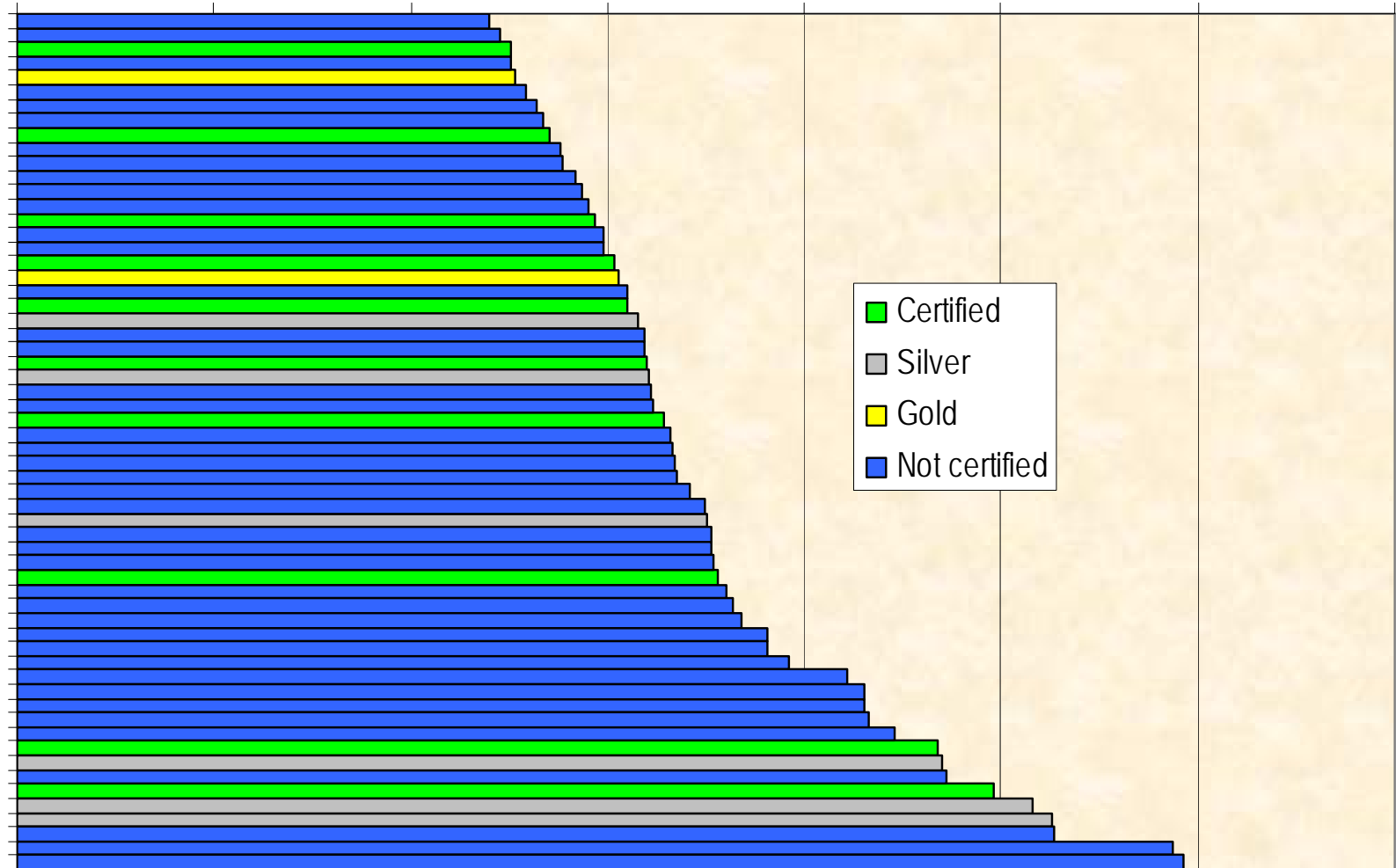
>1 cent



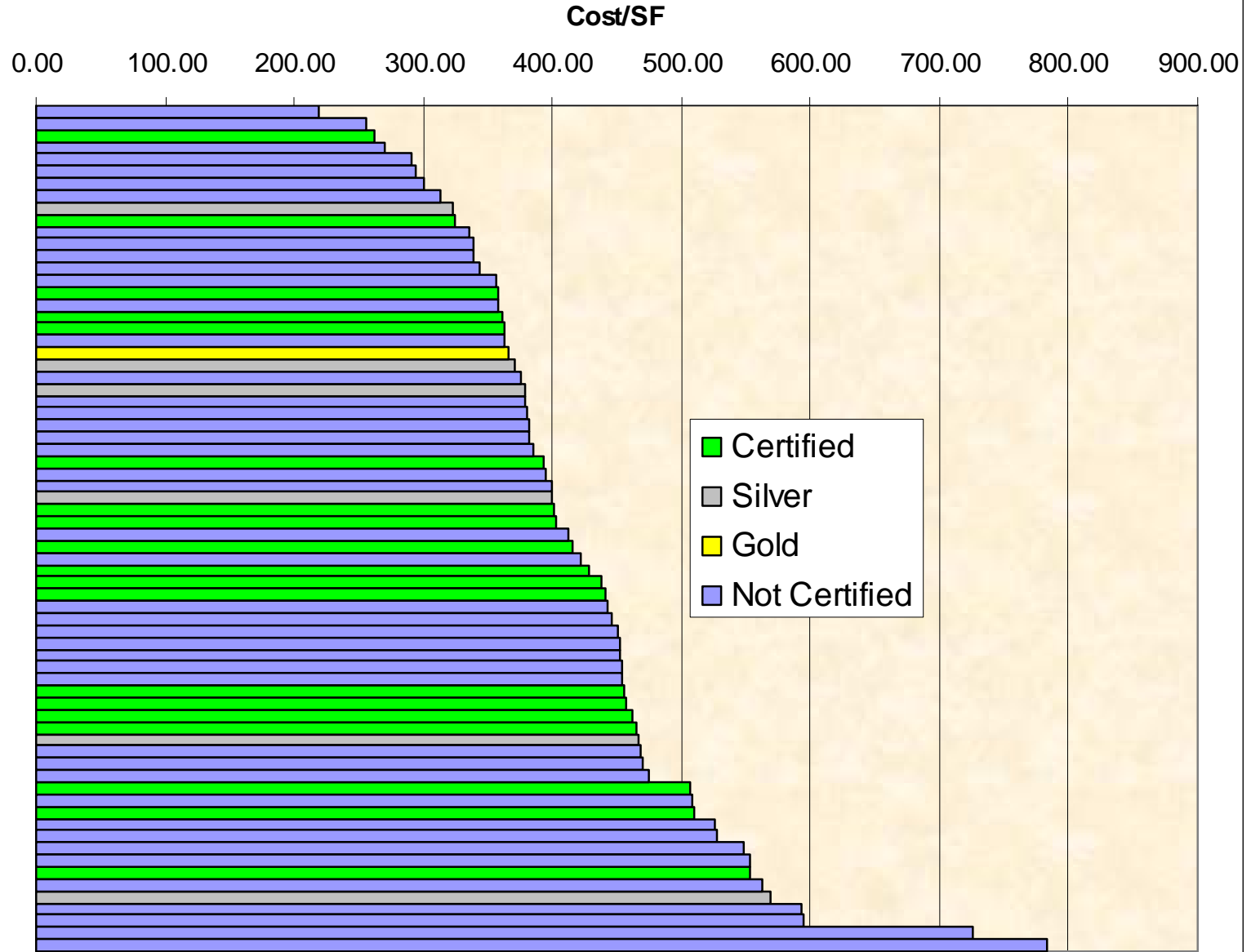
Academic Buildings

Cost/SF

0.00 100.00 200.00 300.00 400.00 500.00 600.00 700.00



Laboratory Buildings



Libraries

Cost/SF

0.00

100.00

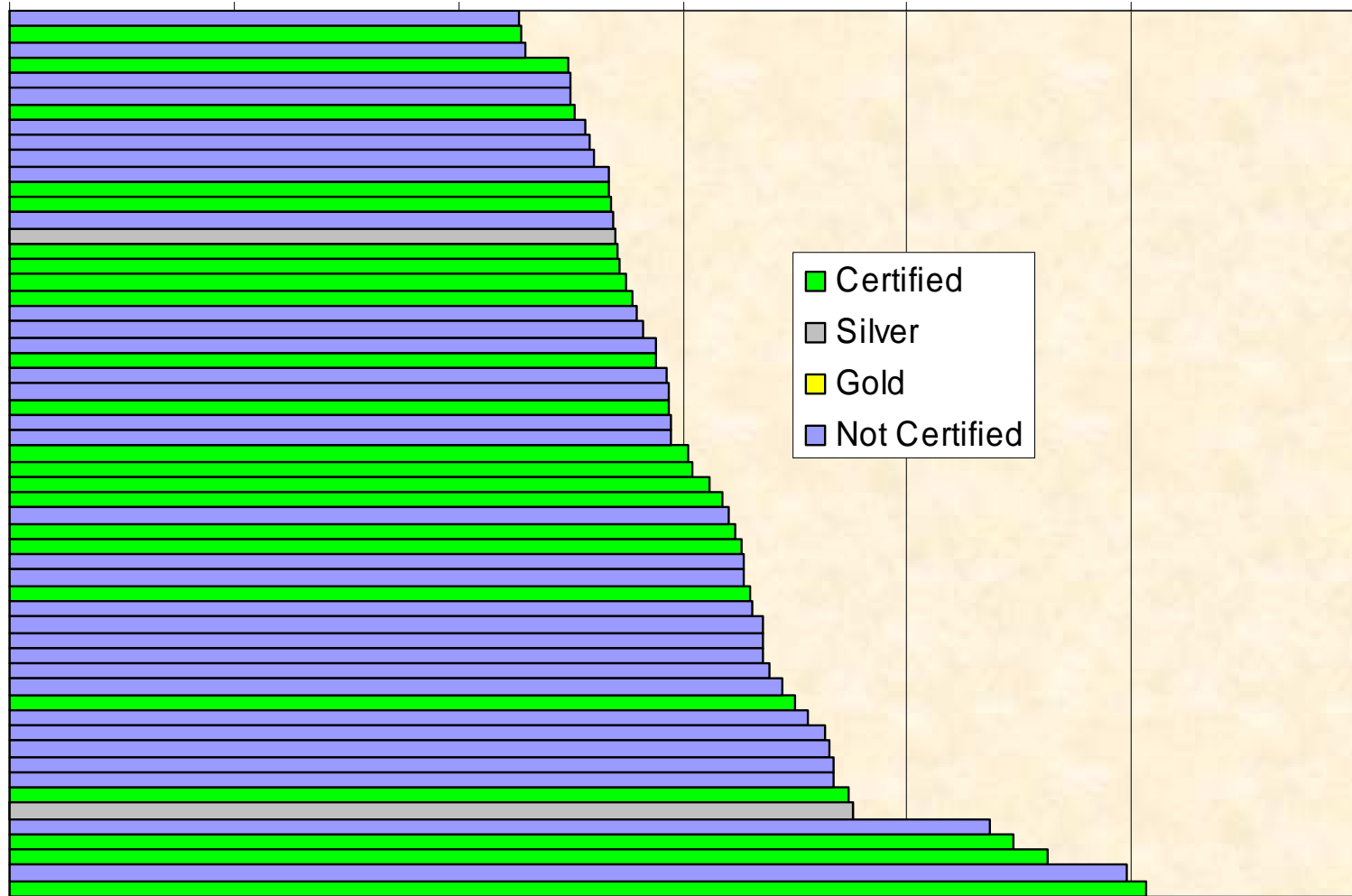
200.00

300.00

400.00

500.00

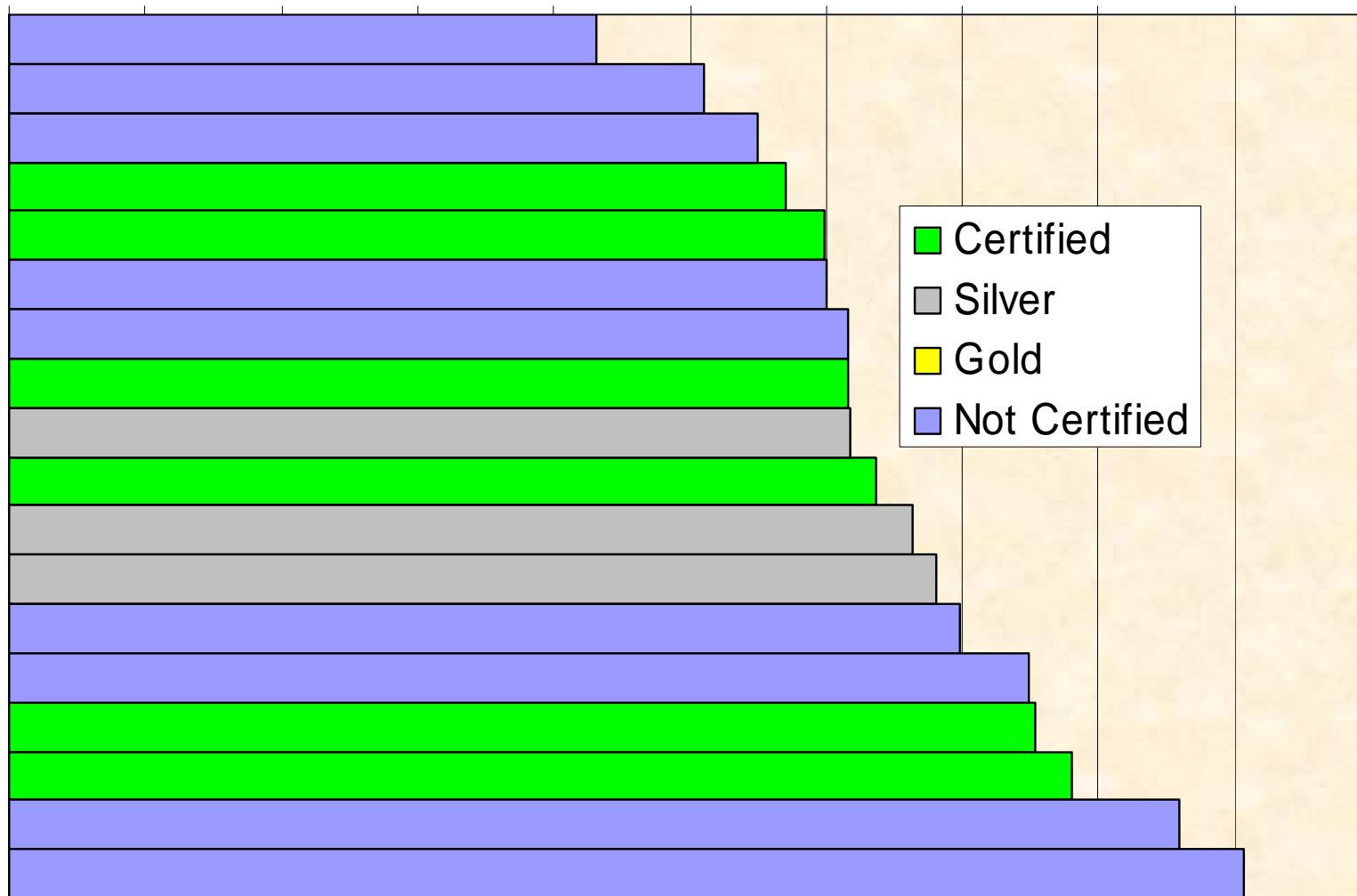
600.00



Community Centers

Cost/SF

0.00 50.00 100.00 150.00 200.00 250.00 300.00 350.00 400.00 450.00 500.00

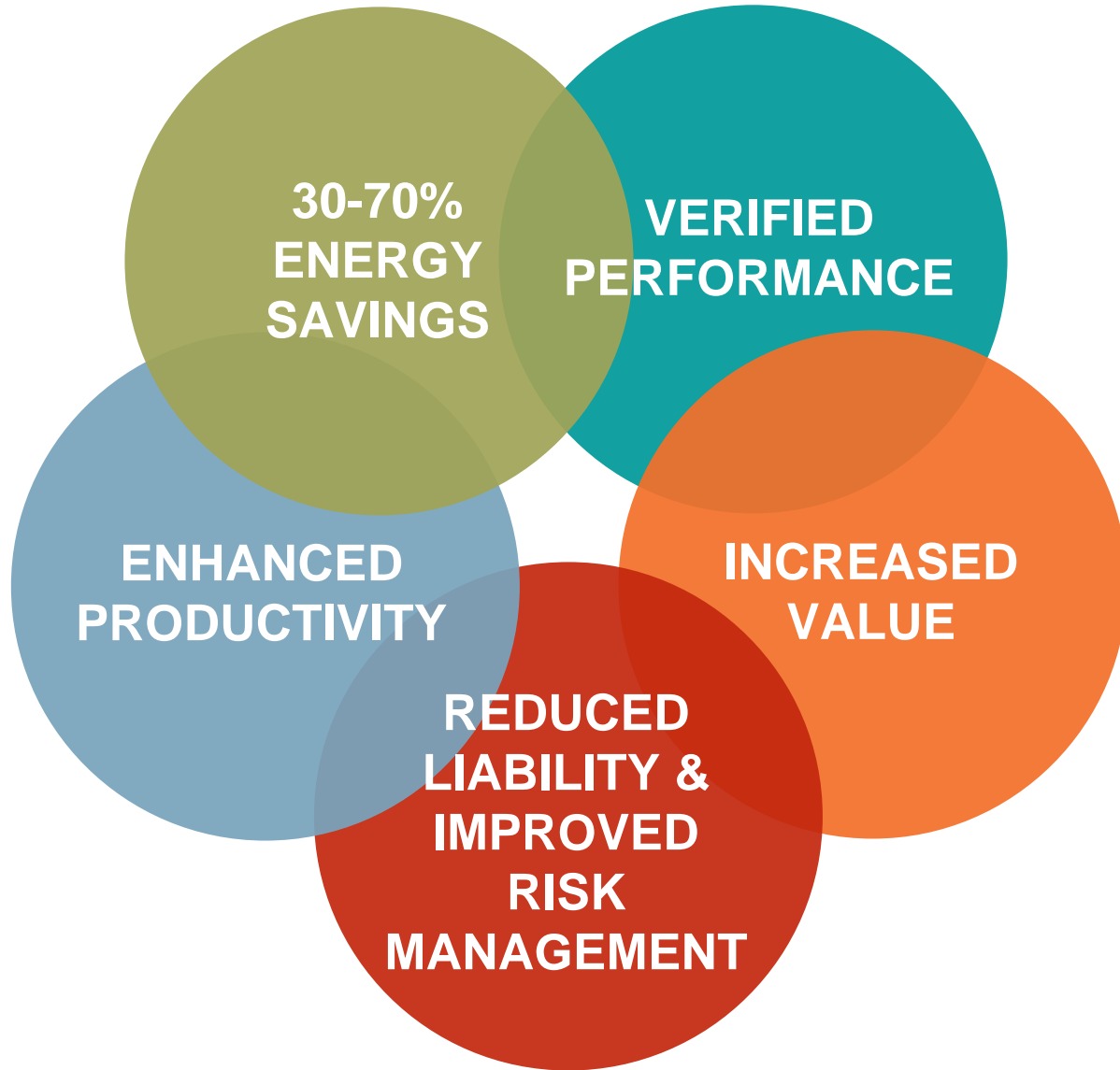


- **Projects are achieving LEED within their budgets, and in same cost range as non-LEED projects.**
- **Construction costs have risen dramatically, but projects are still achieving LEED: cost cannot be a major issue or it would be value-engineered out.**

- Source: Davis Langdon, 2006



**Improved
Bottom
Line.**



Increased Productivity.

SCHOOLS

20%
BETTER TEST
PERFORMANCE

HOSPITALS

EARLIER
DISCHARGE

RETAIL

INCREASE
IN SALES PER
SQUARE FOOT

FACTORIES

INCREASED
PRODUCTION

OFFICES

2-16%
PRODUCTIVITY
INCREASE

CASE STUDY
30 Schools
Studied

33.4%

Average direct
energy savings

50%

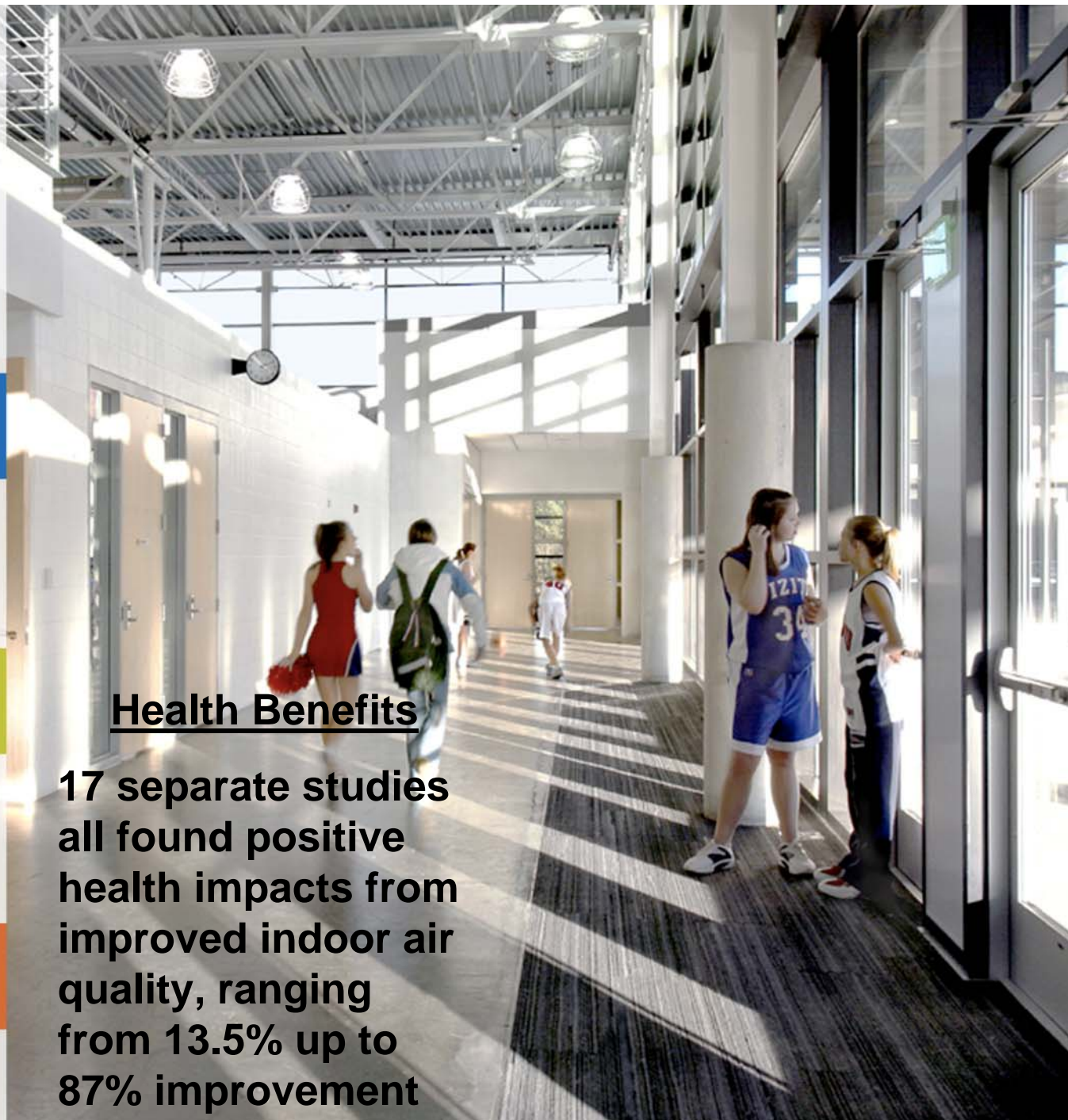
Average indirect
energy savings

32.1%

Average water
savings

Health Benefits

17 separate studies
all found positive
health impacts from
improved indoor air
quality, ranging
from 13.5% up to
87% improvement



DIRECT SAVINGS FOR AN AVERAGE GREEN SCHOOL

\$47,880

Annual direct energy savings per school

\$95,760

Annual total direct savings per school



Architects

**Product
Manufacturers**

**Federal,
Local,
and State
Governments**

**Building
Owners**

Nonprofit Leaders

Planners

USGBC

Engineers

**Financial
Planners**

**Utility
Managers**

**Interior
Designers**

**Landscape
Architects**

**Building
Tenants**

**Property
Managers**

**Code
Officials**





What is the LEED System?

LEADERSHIP in ENERGY and ENVIRONMENTAL DESIGN

A leading-edge
system for
certifying
**DESIGN,
CONSTRUCTION,
& OPERATIONS**
of the greenest
buildings in the
world

Scores are tallied for
different aspects of
efficiency and design
in appropriate
categories.

For instance, LEED
assesses in detail:

1. Site Planning
2. Water Management
3. Energy Management
4. Material Use
5. Indoor
Environmental
Air Quality
6. Innovation &
Design Process

Green Facts

John M. Langston High School
Continuation & Langston-Brown
Community Center
Arlington, Virginia

LEED-NC rating out of 69

Silver 35

Sustainable Site 8

Water Efficiency 3

Energy & Atmosphere 4

Materials & Resources 6

Indoor Environmental
Quality 11

Innovation & Design 3

USGBC LEED-NC rated Sept. 3, 2003.



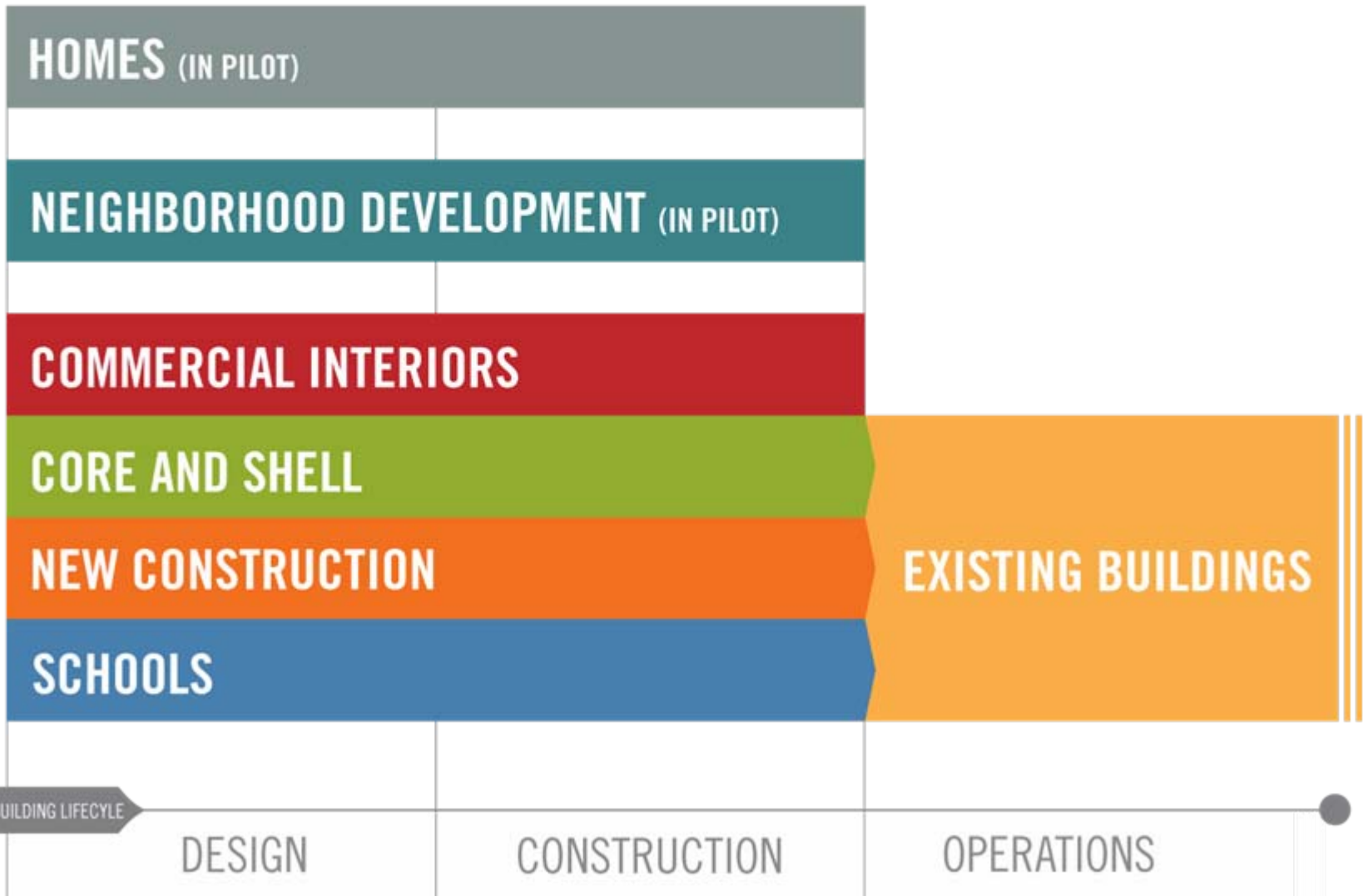
Levels of LEED Ratings

**Green Buildings
worldwide are certified
with a voluntary,
consensus-based
rating system.**

**USGBC has four
levels of LEED.**

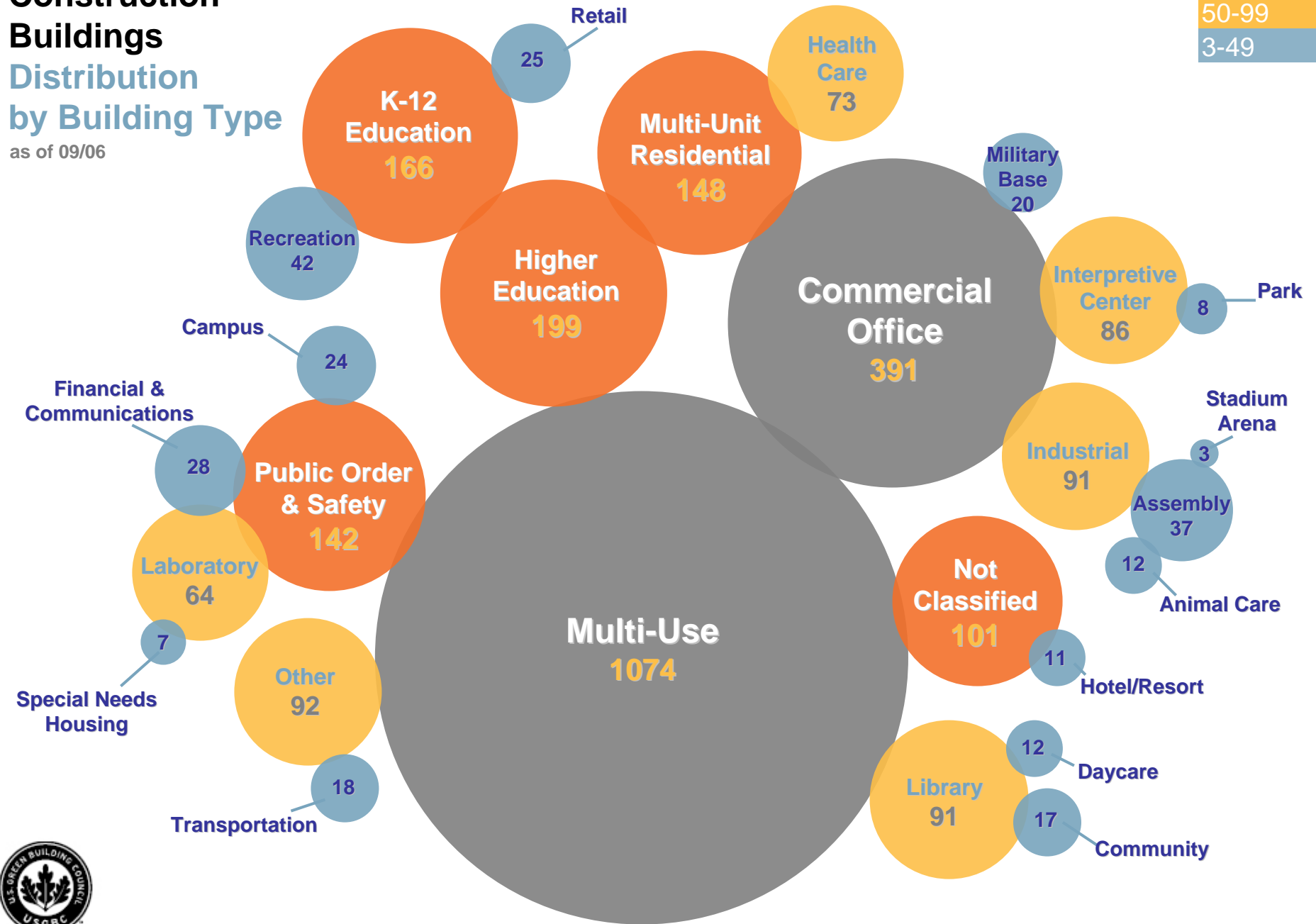
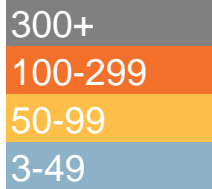


LEED addresses the complete lifecycle of buildings:



LEED for New Construction Buildings Distribution by Building Type

as of 09/06







Energy &
optimization

2+

LEED projects totals:

As of 09/25/2007

Every Business Day:

- \$100 million
worth of
construction
registers with
LEED

1000+
LEED Certified
Projects

7,800+
LEED Registered Projects

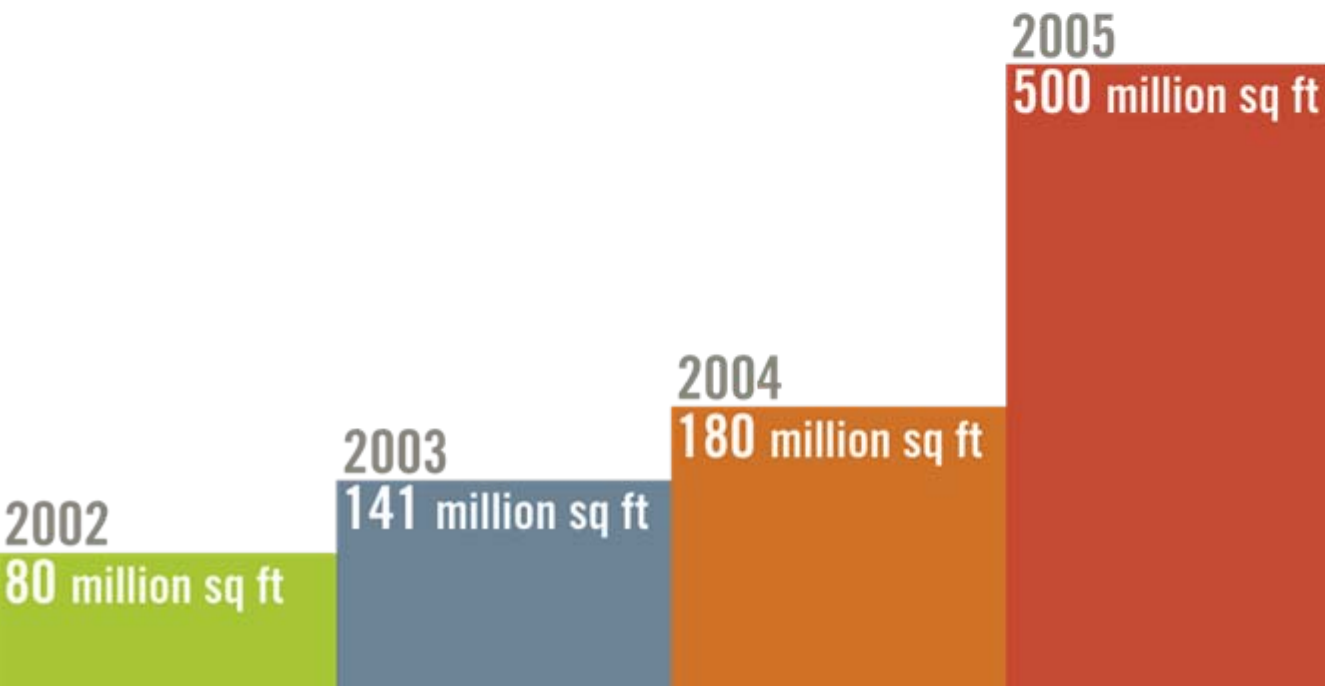


Increase in
LEED projects
since 2002.

2 billion sq ft

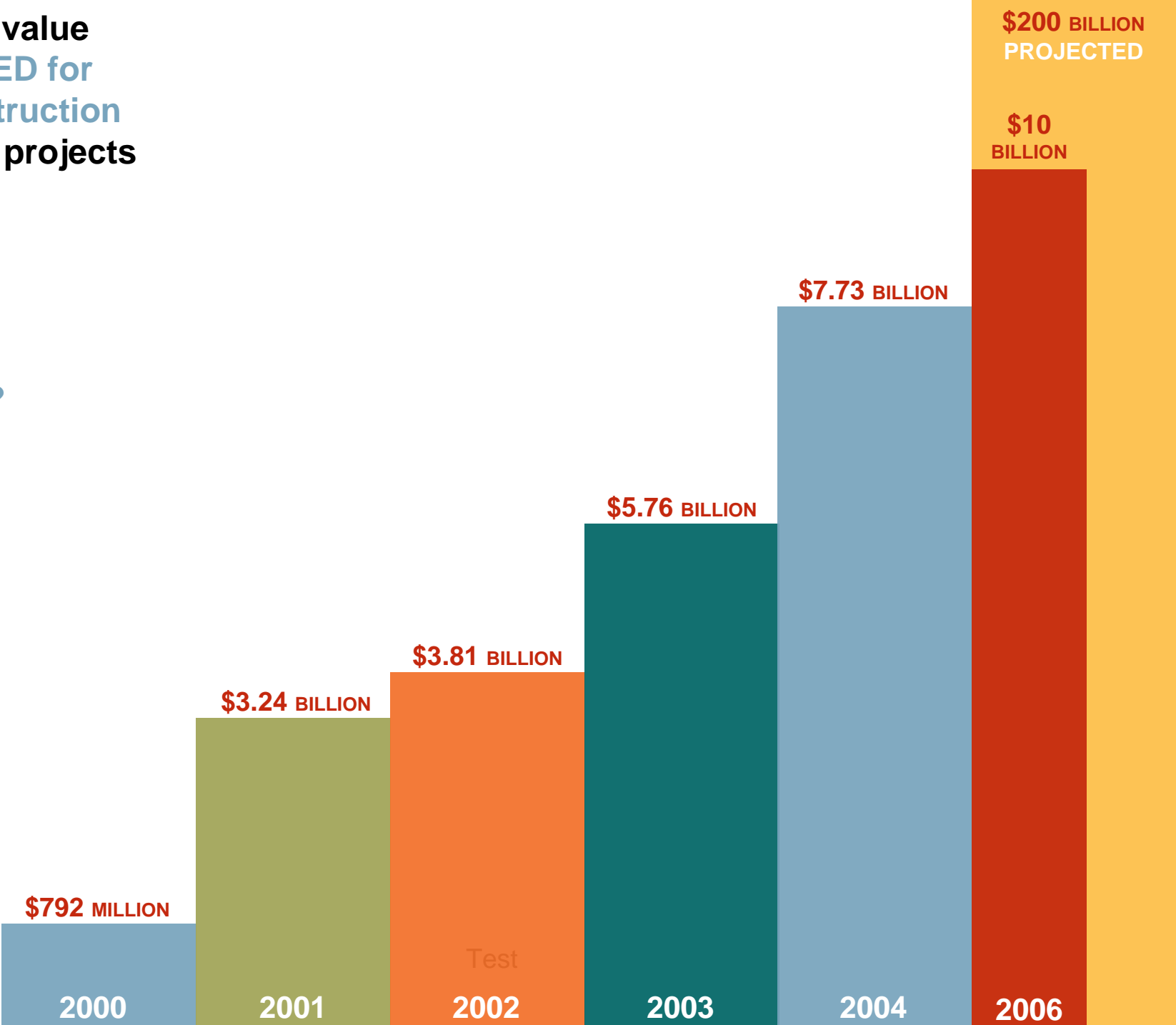
4 billion sq ft

2006/2007
More than
1,100 million sq ft



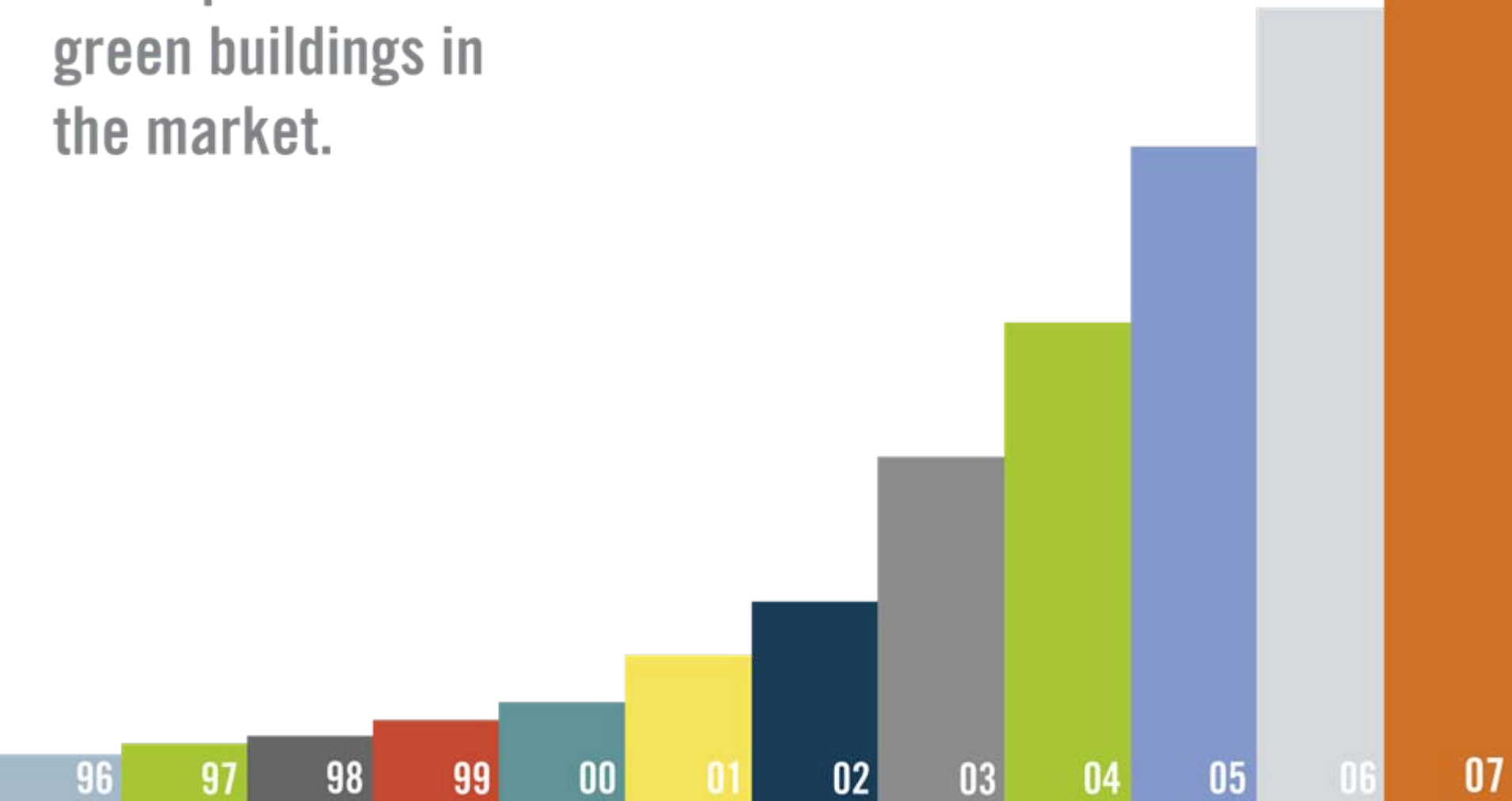
Estimated value of new LEED for New Construction registered projects

Fad?
Trend?
Paradigm?



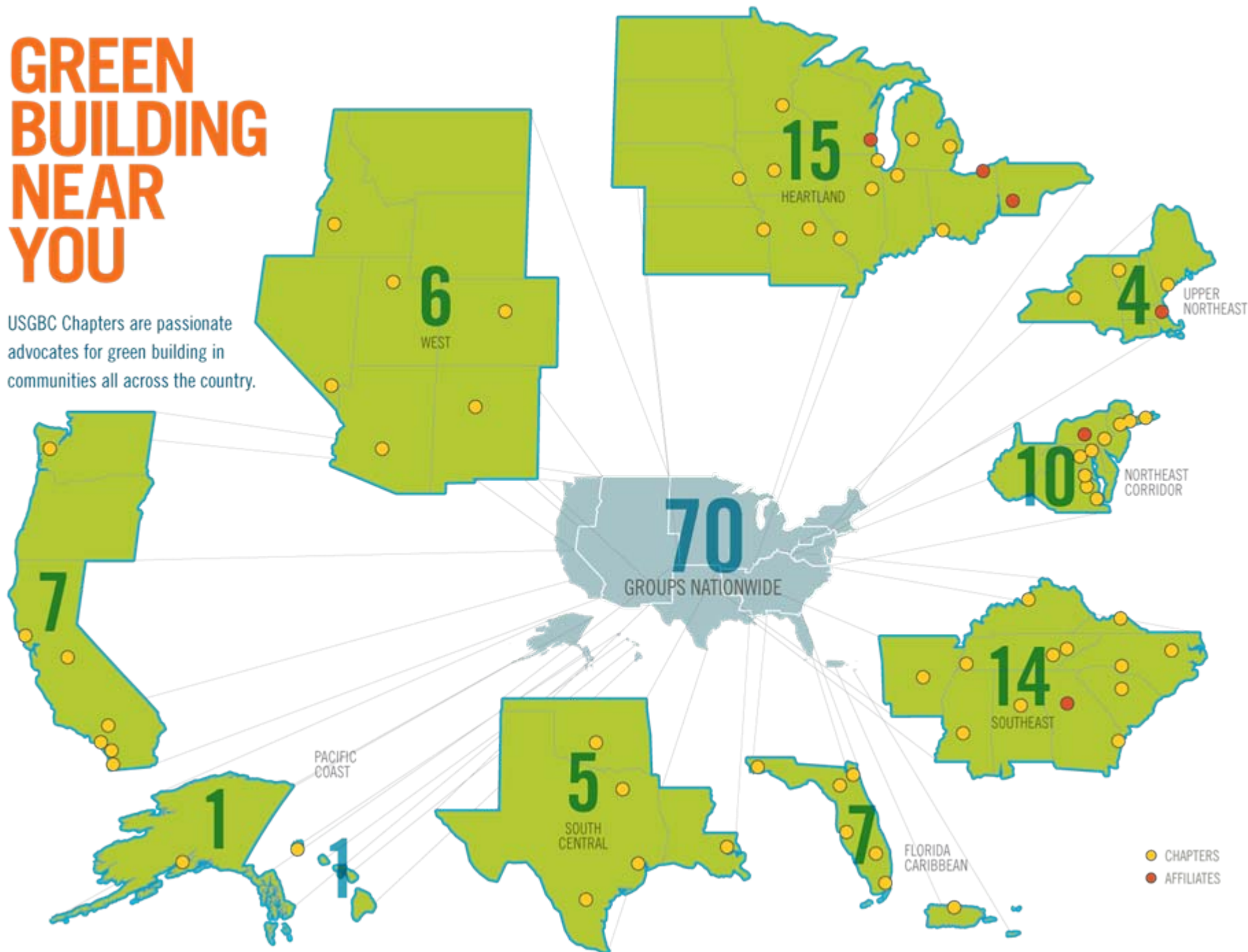
USGBC
membership
growth reflects
the expansion of
green buildings in
the market.

11,185 +



GREEN BUILDING NEAR YOU

USGBC Chapters are passionate advocates for green building in communities all across the country.



SON PARTNERS

Charles Street

07030

40

48

onpartners.com

CK, AIA, LEED AP

AL ARCHITECT

40,000+
LEED APs

25
accreditations
per day
(average)



Leading by Example

The Proliferation of Public Sector Adoptions (80+)

-Acton, MA	-Berkeley, CA	-Dallas, TX	-Irvine, CA	-Miami-Dade, FL
-Alameda Co., CA	-Boulder, CO	-Dublin, CA	-Issaquah, WA	-Monroe Co. NY
-Albuquerque, NM	-Boston, MA	-Eugene, OR	-Kansas City, MO	-Mont. Co. MD
-Arlington, MA	-Calabasas, CA	-Everett, WA	-King County, WA	-Morgantown, WV
-Asheville, NC	-Chapel Hill, NC	-Fort Collins, CO	-Livermore, CA	-Nashville, TN
-Athens, GA	-Chicago, IL	-Frisco, TX	-Long Beach, CA	-New York, NY
-Atlanta, GA	-Cincinnati, OH	-Gainesville, FL	-Los Angeles, CA	-Normal, IL
-Austin, TX	-Clayton, MO	-Grand Rapids, MI	-LA County, CA	-Pasadena, CA
-Babylon, NY	-Cook County, IL	-Honolulu, HI	-Madison, WI	-Sarasota Co. FL
-Bellingham, WA	-Cranford, NJ	-Howard Co., MD	-Miami Lakes, FL	-St. Louis, MO



Case Study

City of Seattle Justice Center

City of Seattle
owner

Municipal courts
and police
headquarters
288,000 sq ft

LEED Silver

33% energy savings

Rainwater reclaimed for irrigation

88% construction waste salvaged



Case Study

The Chicago Center for Green Technology

Chicago Dept.
of the Environment
owner/operator

Multi-use:
government and
commercial offices,
assembly and
educational
40,000 sq ft

LEED Silver

40%
energy savings

50%
of storm water
is reclaimed

84%
construction
waste salvaged



Case Study Calvin College Bunker Interpretive Center

Calvin College
owner

Multiple use
5,270 sq ft

LEED Gold

60%
energy savings

74%
water savings

84%
construction
waste salvaged



Case Study Seattle Pacific University Science Building

Seattle Pacific
University,
Seattle, WA
owner

Higher education
63,000 sq ft

LEED Certified

60%
energy savings

53%
water savings

91%
waste diverted
from landfill
85% recycled content



Case Study Homewood Middle School

Homewood Board of
Education
Homewood, AL

Middle School
179,600 sq ft

LEED Silver

38%
energy savings

40%
water savings
50% reduced
irrigation

95%
day lit spaces



Case Study Fossil Ridge High School

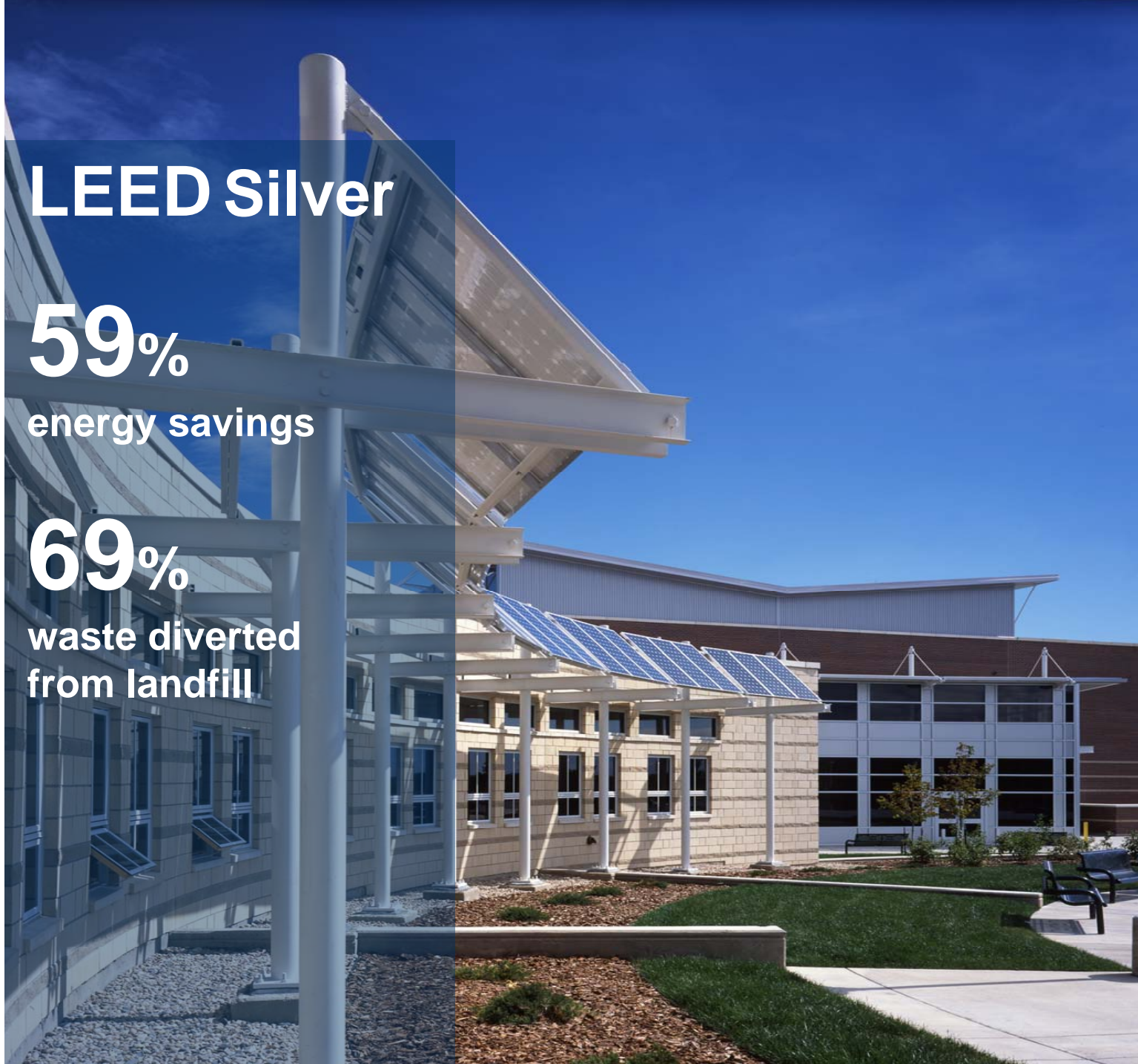
Poudre School
District
Fort Collins, CO
owner

K-12 Education
289,100 sq ft

LEED Silver

59%
energy savings

69%
waste diverted
from landfill



immediate
& measurable



